

1224 Boston Ave Longmont, CO 80501 E-Mail: service@intermountain-railway.com Phone: (303) 772-1901 Fax: (303) 772-8534 Web Site: www.intermountain-railway.com

## **SERVICE DEPARTMENT MEMO** Alternating Ditch Light White Paper

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Many customers have asked about how to modify their Norfolk Southern ES44DC locomotive to have alternating flashing ditch lights. This white paper will detail the specific steps necessary to modify the wiring to provide for this change.

As background, this model comes with both front and rear ditch lights and the lights have been wired to illuminate together. At the completion of these steps the rear ditch lights will be controlled by the rear headlight, and the front ditch lights will be able to alternately flash.

Please review this steps carefully prior to proceeding. You will need a few tools, along with a soldering iron, appropriate safety measure should be taken.

- 1. Remove the shell per the shell removal instructions provided with your locomotive. Realize that the speaker wires are connected to the shell and should not be pulled on with force.
- 2. Remove the front ditch light shroud, the headlight/number board shroud, and the rear ditch light board shroud. Remove the zip ties holding the wires together.
- 3. Remove the 6-pin light plug from the decoder, noting which is pin 1 (noted by the number 1 printed on the circuit board).
- 4. Following the wire from pin 6 to the rear ditch-light/rear-light board, cut it approximately one inch from the board. Using the short wire re-solder it to the board at the same point that the rear-light is connected, pad point 2. This wires the rear ditch-lights with the rear-light.
- 5. Thread the wire from pin 6 to the front ditch-light board, and solder it to pad point 4. Pad point 4 & 6 have been soldered together and will need to be separated. The solder can be undone on the reverse side of the board.
- 6. Reassemble the locomotive and test the light functions. Be sure and reset the decoder (CV8=8) to validate that everything is working properly.

Thank you for your support of InterMountain Railway Company products. If we can be of further help to you, please contact us.

Richard Frazier Service Department